

Report No. ETC22F350048

Special Equipment Type Test Report (Lifts)

Category of equipment:	Lift safety protection components
Type of equipment:	Ascending car overspeed protection means
Name of product:	Ascending car overspeed protection means
Model of product:	MEKB
Manufacturer:	ZheJiang MATO Drive Equipment Co., Ltd.
Applicant:	ZheJiang MATO Drive Equipment Co., Ltd.
Category of type test:	Overall test at first
Test date:	2022-11-22

Shanghai Jiao Tong University Elevator Test Center



NOTICES

- 1、 The report is the result of the type test according to the TSG T7007-2022 *Regulation for Type Test of Lifts*.
- 2、 The report shall be printed by computer and be invalid with any modification.
- 3、 The report will be invalid without the signature of approver, verifier and tester .It will also be invalid without the approval certificate, the cross-page official stamp of the type test entity.
- 4、 Type test report is only valid for the sample.
- 5、 It is forbidden to copy the report partly without the permission of the type test organ. The partly copied report will be invalid.
- 6、 Any dissents to the report must be put forward to the type test organ within 15 working days from receiving it. Otherwise, it is considered that the report is accepted.
- 7、 The test samples shall be handled according to relevant regulations except that they are not returned due to legitimate losses.
- 8、 The report is made in quadruplicate, one for the type test organ and three for the applicant.
- 9、 Type test report and certificate should be subject to the Chinese version, while the English version is for reference only.
- 10、 The addresses of Elevator Test Center, Shanghai Jiaotong University are as follows:

(1) Dongchuan Road Laboratory

Room B210, School of Mechanical Engineering, Shanghai Jiaotong University

No.800, Dongchuan Road, Minhang District, Shanghai, P.R. China

Tel: +86-21-34207035/34207036

Fax: +86-21-34207035/34207036-814

Zip code: 200240

(2) Jindu Road Laboratory

Room 1001, Comprehensive Building, South Urban Park

No.123, lane 1165, Jindu Road, Minhang District, Shanghai, P.R. China

Tel : +86-21-61267037

Fax : +86-21-61267037 to 812

Zip code: 201108



Category of equipment	Lift safety protection components	Type of equipment	Ascending car overspeed protection means
Name of product	Ascending car overspeed protection means	Model of product	MEKB
Serial number of product	M5E220004612	Date of manufacture	2022-09-29
Applicable product model(s)	/		
Applicant	ZheJiang MATO Drive Equipment Co., Ltd.		
Registered address of applicant	Workshop 4, No. 188, Yanghua Village, Nanxun Town, Nanxun District, Huzhou City, Zhejiang Province		
Unified social credit code	91330503684520102Y		
Manufacturer	ZheJiang MATO Drive Equipment Co., Ltd.		
Registered address of manufacturer	Workshop 4, No. 188, Yanghua Village, Nanxun Town, Nanxun District, Huzhou City, Zhejiang Province		
Unified social credit code	91330503684520102Y		
Manufacturing address	Workshop 4, No. 188, Yanghua Village, Nanxun Town, Nanxun District, Huzhou City, Zhejiang Province		
Location of test	Dongchuan Road Laboratory of Shanghai Jiao Tong University Elevator Test Center		
State of sample	No abnormal	Test date	2022-11-22
Test conditions	No abnormal	Category of type test	Overall test at first
Test basis	TSG T7007-2022 <i>Regulation for Type Test of Lifts</i> , GB/T 7588.1-2020, GB/T 7588.2-2020, ISO 8100-1:2019, ISO 8100-2:2019, EN 81-20:2014(EN 81-20:2020), EN 81-50:2014(EN 81-50:2020)		
Test Conclusion	Certificated.		
Tested by: 洪荣凯	Date: 2022-11-29	Approval certificate of type test organ: TS7610022-2025 Shanghai Jiao Tong University Elevator Test Center 2022-11-29	
Verified by: 李志	Date: 2022-11-29		
Approved by: 张晓峰	Date: 2022-11-29		



1. Technical parameters and configuration of sample

Range of the permissible system mass		3370~10030(kg)	Range of the rated load	1600~3000(kg)
Type of speed reducing elements		Traction machine brake	Limits of the weight of the car	1280~4200(kg)
Anti-mechanical spark measures		N/A		
Range of balance factor		0.4~0.5	Reeving factor	2:1
Speed (rotation rate) range of the braked elements when ACOP acts		/	Compensating ropes or chains	Can be used
Speed monitoring device	Name	Overspeed governor	Model	/
	Range of rated speed	≤3.0m/s	Range of the tripping speed	≤3.83m/s
Rope gripper	Model	/	Position which the means act on	/
	Type of elastic elements	/	Model of elastic elements	/
	Tripping mode	/	Release mode	/
	Shape of friction elements	/	Material of friction elements	/
	Type and model of steel ropes	/	Quantity of steel ropes	/
Speed reducing elements acting on guide rails	Name	/	Model	/
	Type	/	Applicable material of guide rail	/
	Type of elastic elements	/		
	Type of gripping (braking) elements	/	Material of gripping (braking) elements	/
	Quantity of gripping (braking) elements	/	Dimensions of gripping (braking) friction surface	/
	Applicable hardness of guide surface of guide rails	/	Applicable width of guide surface of guide rails	/
	Applicable processing method of guide surface of guide rails	/	Applicable lubrication of guide surface of guide rails	/
Traction machine brake	Model	MEKB	Structure	Block
	Position which the means act on	The traction sheave	Quantity	2
	Material of friction elements	Asbestos free composite	Tripping mode	Electric switches of the overspeed governors, Activated after power off
	Type of elastic elements	Cylindrical coil spring	Diameter of brake wheel or Inner and Outer Diameter of braking disk	Φ600mm



2. Check for technical documents of the sample

No.	Items No.	Check items	Check results	Conclusion
1	Q5.1	Conformity certificate documents and relative technical documents	Comply with requirements	Pass
2	Q5.2	Technical parameters	Comply with requirements	Pass
3	Q5.3	Main design drawings	Comply with requirements	Pass
4	--	Technical documents of applicable products	N/A	N/A

3. Check and test of the sample

No.	Items No.	Check and test items	Check and test results	Conclusion
1	Q6.1	Position which the means act on	Traction sheave	Pass
2	Q6.2.1	Braking tests for speed reducing elements	Comply with requirements	Pass
3	Q6.3	External energy to operate	Comply with requirements	Pass
4	Q6.4	Electric safety devices	Comply with requirements	Pass
5	Q6.5	Explosion proof environment	N/A	N/A
6	Q6.6	Tripping mode	Electrical trigger	N/A
7	Q6.7	Release mode	Automatic release	N/A
8	Q6.8	Tripping force	Electrical trigger	N/A
9	Q6.9	Effective stroke of trigger mechanism	Electrical trigger	N/A
10	Q6.10	Nameplate	Comply with requirements	Pass

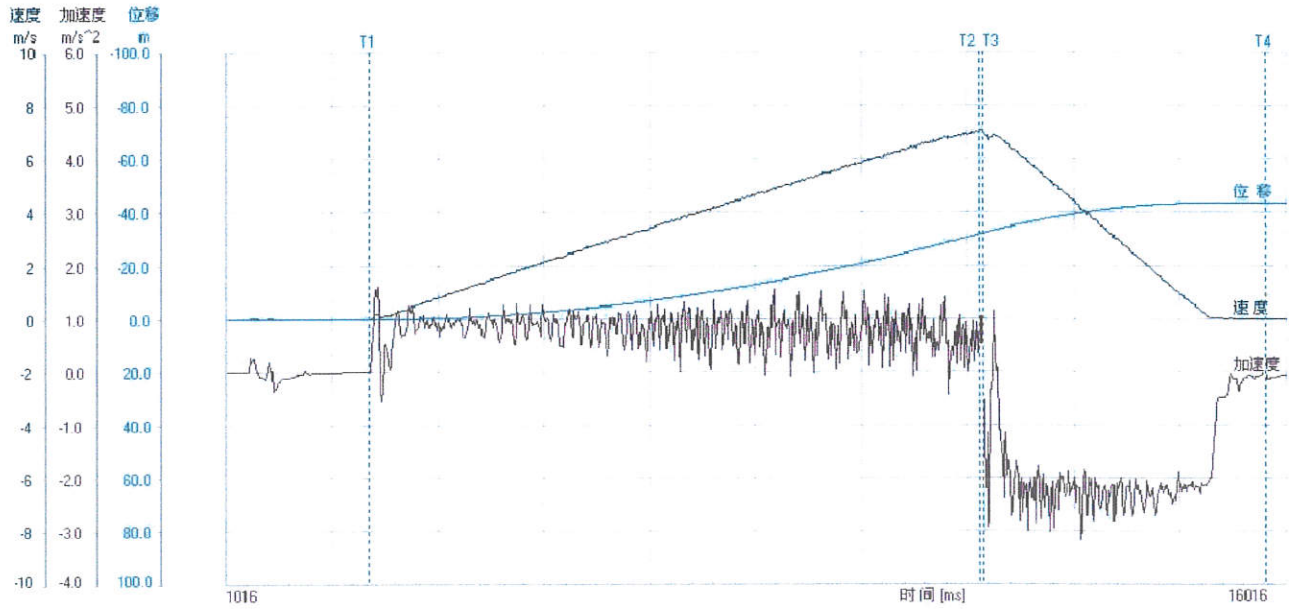


Appendix

1. Curves of tests

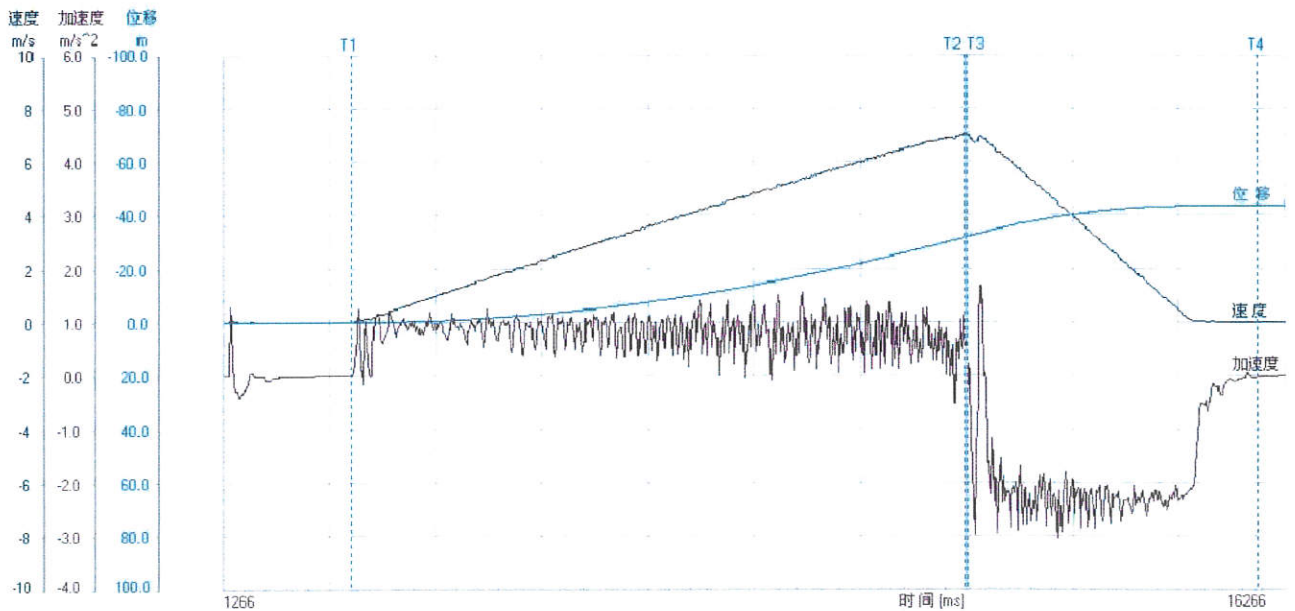
Braking curves of the 1st free fall test

(Reeving factor: 1:1, rated load: 1500kg, system mass:5015kg , the corresponding rated speed: 6.0m/s)



Braking curves of the 2nd free fall test

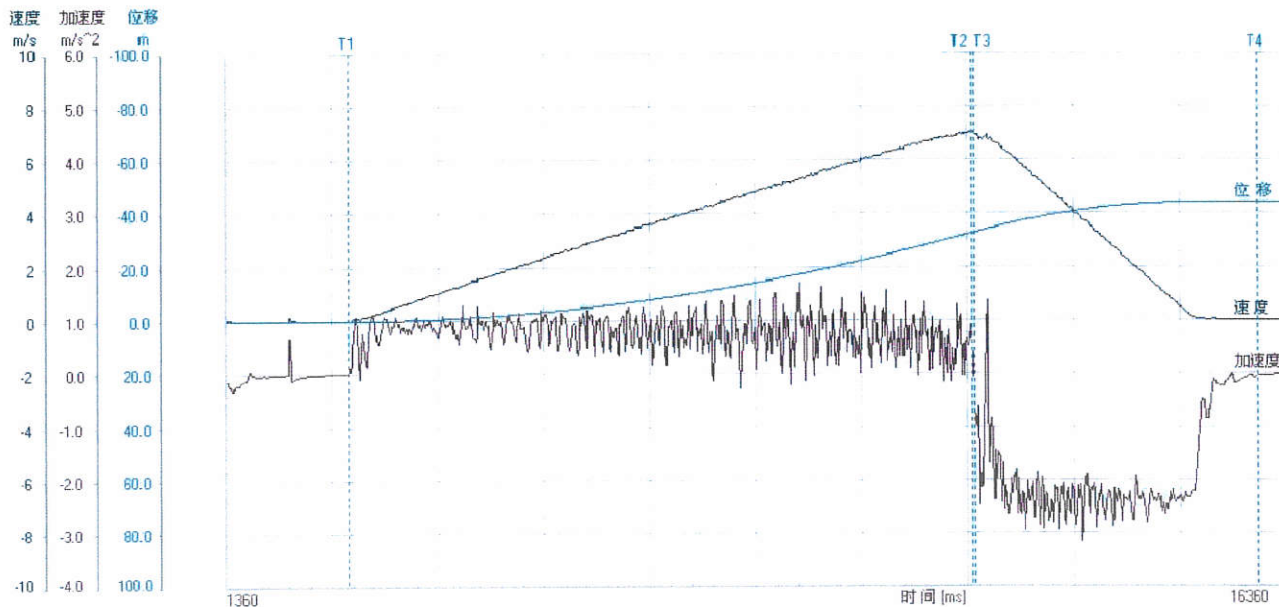
(Reeving factor: 1:1, rated load: 1500kg, system mass:5015kg , the corresponding rated speed: 6.0m/s)





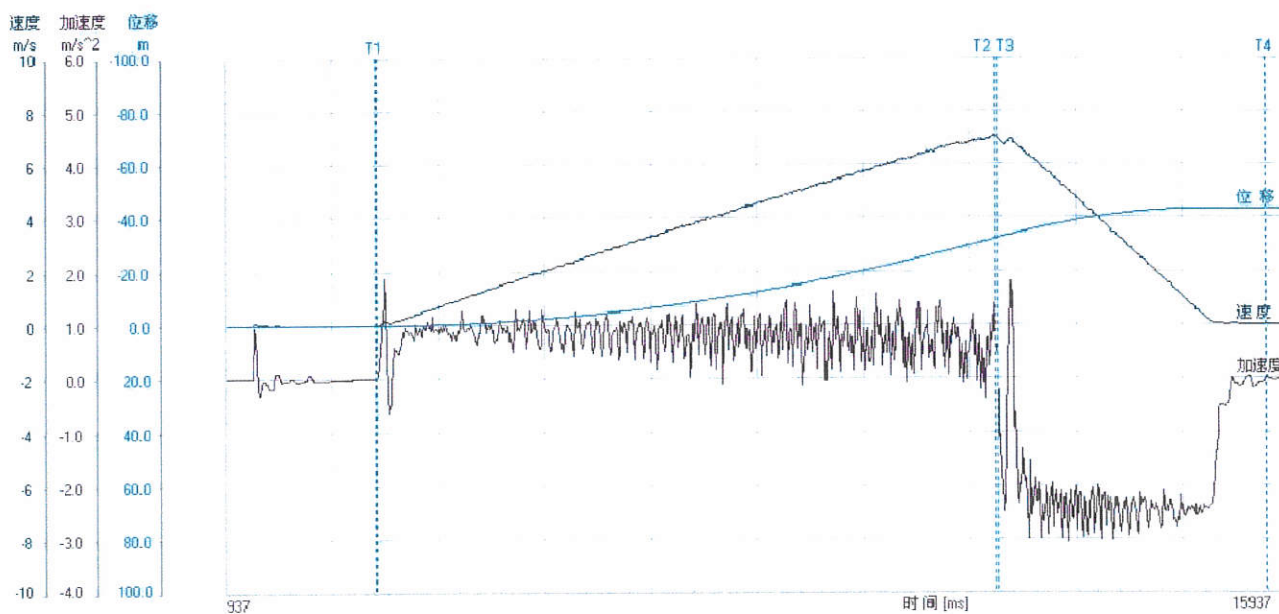
Braking curves of the 3rd free fall test

(Reeving factor: 1:1, rated load: 1500kg, system mass:5015kg, the corresponding rated speed: 6.0m/s)



Braking curves of the 4th free fall test

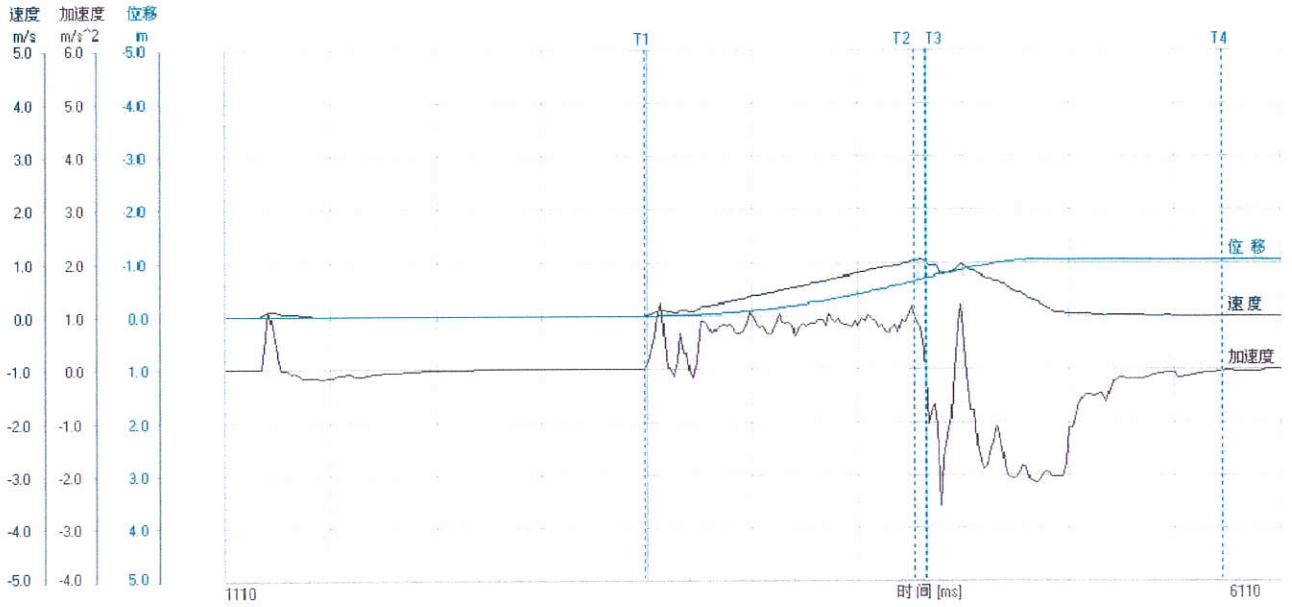
(Reeving factor: 1:1, rated load: 1500kg, system mass:5015kg, the corresponding rated speed: 6.0m/s)





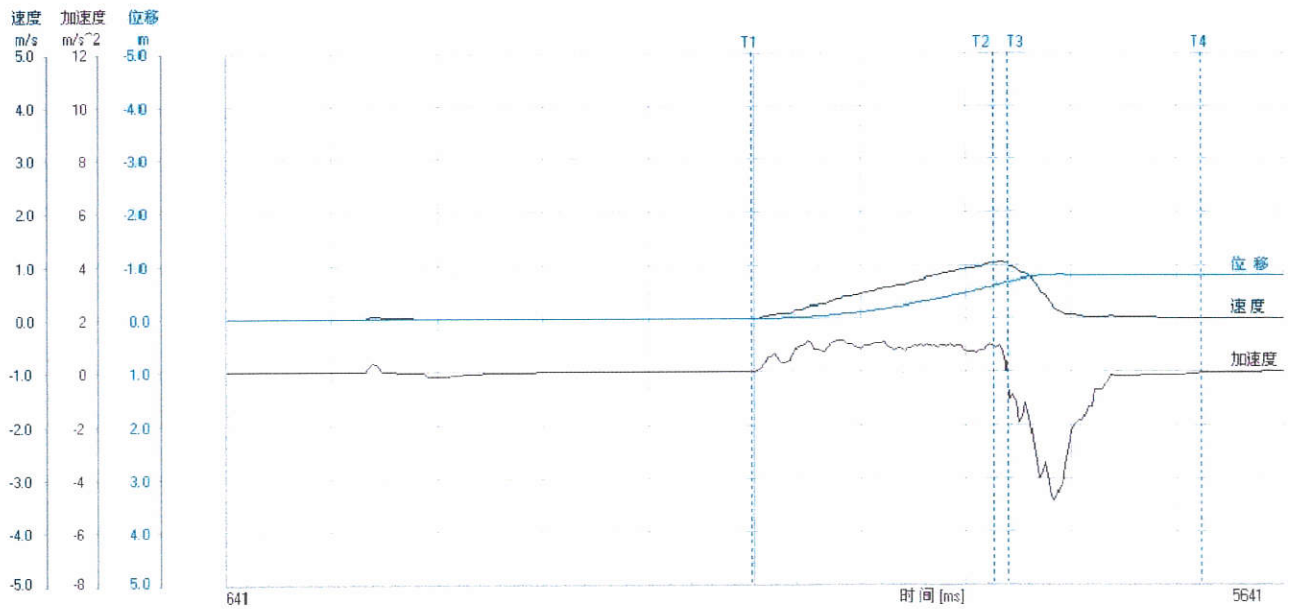
Braking curves of the 5th free fall test

(Reeving factor: 1:1, rated load: 1500kg, system mass:5015kg, the corresponding rated speed: 0.5m/s)



Braking curves of the 6th free fall test

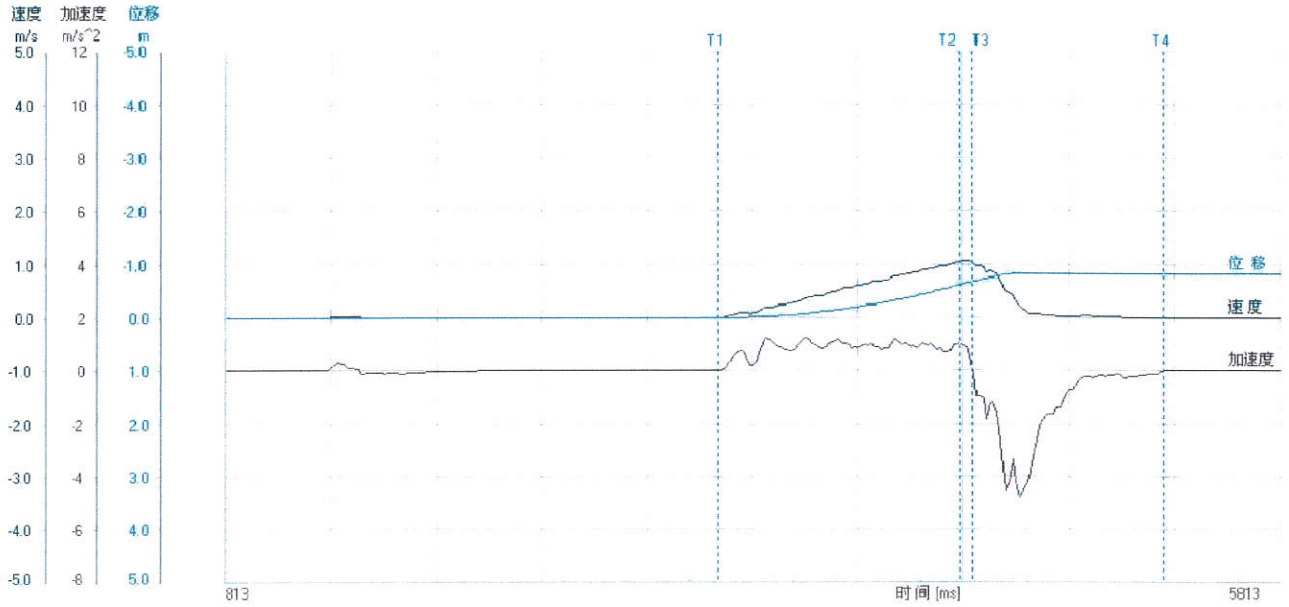
(Reeving factor: 1:1, rated load: 800kg, system mass:1685kg, the corresponding rated speed: 0.5m/s)





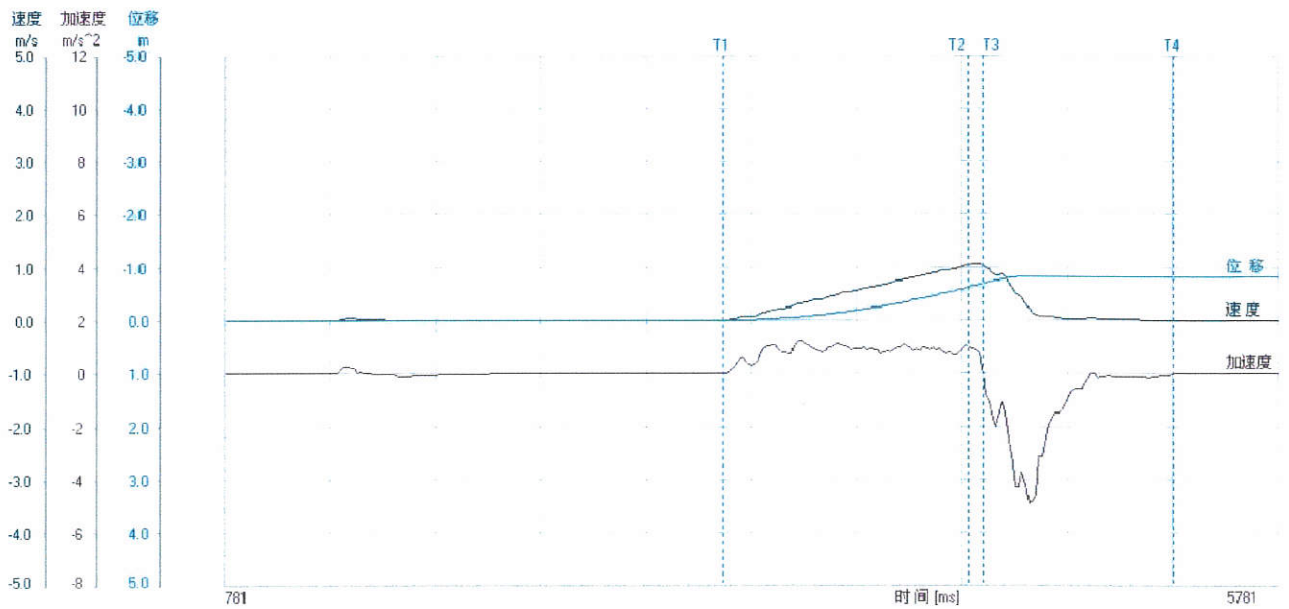
Braking curves of the 7th free fall test

(Reeving factor: 1:1, rated load: 800kg, system mass:1685kg , the corresponding rated speed: 0.5m/s)



Braking curves of the 8th free fall test

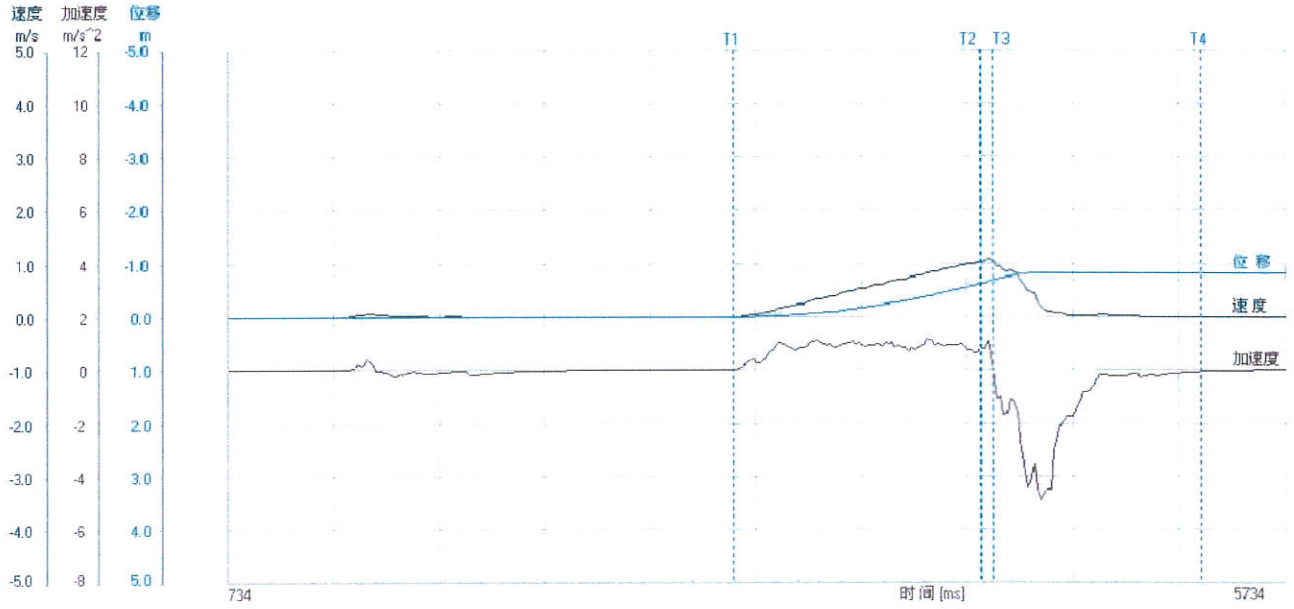
(Reeving factor: 1:1, rated load: 800kg, system mass:1685kg , the corresponding rated speed: 0.5m/s)



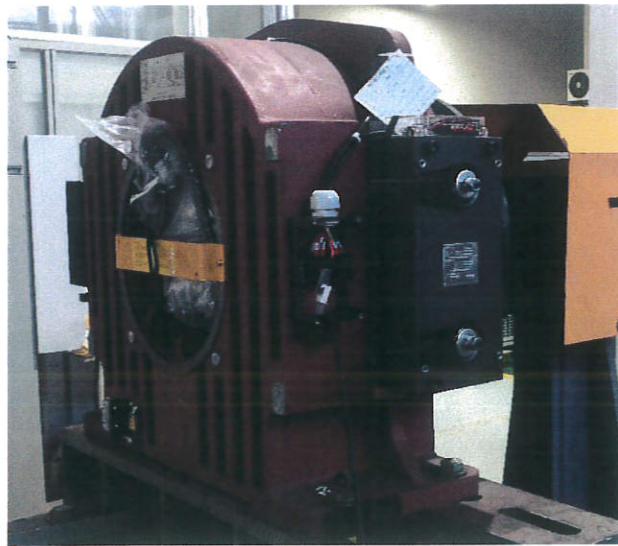


Braking curves of the 9th free fall test

(Reeving factor: 1:1, rated load: 800kg, system mass: 1685kg, the corresponding rated speed: 0.5m/s)



2. Photo of the sample





3. Other information

- (1) The system mass includes not only the mass of the car and the counterweight, but also the mass of traction rope, compensation chain /rope and traveling cable.
- (2) The figures of deceleration, not responses of direct tests, are the results of velocity's differential. The figures of displacement, not responses of direct tests, are the results of velocity's integral.
- (3) During the test, the sample had an after-flow device attached with the sample and directly connected to both ends of the brake coil.
- (4) This English report is a translated version of the Chinese report and is issued on the same date as the Chinese report.

4. Revise(s) of the type test report

None.

ETC